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NEWS EXPRESS DECEMBER 28 CURRENT WINDOWS VERSION IS V7.00, CURRENT
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
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09839289.1 Page 2

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=> file reg

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

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STRUCTURE FILE UPDATES: 11 FEB 2004 HIGHEST RN 649538-27-2 DICTIONARY FILE UPDATES: 11 FEB 2004 HIGHEST RN 649538-27-2

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

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L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS L1 STR

Structure attributes must be viewed using STN Express query preparation.

=> s ll sss full

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FULL SCREEN SEARCH COMPLETED - 348 TO ITERATE

100.0% PROCESSED 348 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

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=> file marpat

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION

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FILE 'MARPAT' ENTERED AT 13:27:28 ON 12 FEB 2004
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FILE CONTENT: 1988-PRESENT (VOL 140 ISS 06) (20040206 ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES (COVERAGE TO THESE DATES IS NOT COMPLETE):

US 6673954 06 JAN 2004 DE 10317295 08 JAN 2004 EP 1380632 14 JAN 2004 JP 2004014584 15 JAN 2004

WO 2004004674 15 JAN 2004

Structure search limits have been raised. See HELP SLIMIT for the new, higher limits.

=> s l1 sss full

FULL SEARCH INITIATED 13:27:36 FILE 'MARPAT'

FULL SCREEN SEARCH COMPLETED - 1999 TO ITERATE

09839289.1 Page 4

100.0% PROCESSED 1999 ITERATIONS

SEARCH TIME: 00.00.09

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=> file caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL

8 ANSWERS

FULL ESTIMATED COST ENTRY SESSION 109.42 265.05

FILE 'CAPLUS' ENTERED AT 13:27:51 ON 12 FEB 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 12 Feb 2004 VOL 140 ISS 7 FILE LAST UPDATED: 11 Feb 2004 (20040211/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L5 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

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AN
     2003:77551 CAPLUS
DN
     138:131150
     Methods for treating cognitive/attention deficit disorders using
TI
     tetrahydroindolone analogues and derivatives
     Glasky, Alvin J.; Fick, David B.; Helton, David
IN
PA
     U.S. Pat. Appl. Publ., 15 pp., Cont.-in-part of U.S. Ser. No. 839,289.
SO
     CODEN: USXXCO
DT
     Patent
LΑ
     English
FAN.CNT 4
                                          APPLICATION NO. DATE
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	RL: PAC (Pharmaco	ologic	al activity); S	SPN (Synthetic preparation); THU								
	(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)											
	(and metabolites; treating cognitive/attention deficit disorders using tetrahydroindolone analogs and derivs.)											
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RN 389799-42-2 CAPLUS

CN Benzoic acid, 4-[[1-oxo-3-(4,5,6,7-tetrahydro-4-oxo-1H-indol-1-yl)propyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

AB Methods for treating cognitive/attention deficit disorders in general using tetrahydroindolone derivs. and analogs, particularly tetrahydroindolone derivs. or analogs in which the tetrahydroindolone derivative or analog is covalently linked to another moiety to form a bifunctional conjugate are disclosed. More specifically, methods and compns. for treating attention deficit disorder and attention deficit hyperactivity disorders in adults and children as well as mild cognitive impairment and dementia are provided.

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L5 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
```

AN 2002:832760 CAPLUS

DN 137:337779

TI Preparation of tetrahydroindolone analogs and derivatives as nootropic agents

IN Fick, David B.; Foreman, Mark M.; Glasky, Alvin J.

PA Neotherapeutics, Inc., USA

SO PCT Int. Appl., 40 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 4

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PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2002085856 Al 20021031 WO 2002-US11142 20020408

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09839289.1
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Page 7

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     389799-42-2P
     RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
        (preparation of tetrahydroindolone analogs and derivs. as nootropic agents)
RN
     389799-42-2 CAPLUS
     Benzoic acid, 4-[[1-oxo-3-(4,5,6,7-tetrahydro-4-oxo-1H-indol-1-
CN
     yl)propyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)
```

GΙ

AB Tetrahydroindolone analogs and derivs. (e.g., I; wherein R = H, Et) were prepared Compound I (R = Et) was prepared in 56% yield by reacting acryloyl chloride with 4-aminobenzoic acid Et ester to give 76% 4-acryloylaminobenzoic acid Et ester, followed by reaction with 1,5,6,7-tetrahydro-4H-indol-4-one. Compound I (R = H) is then accessed through hydrolysis of the product. The prepared compds. showed good activity as nootropic agents. Thus, the minimal ED of I (R = Et) was 0.001 mg/kg in a passive avoidance test on mice.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L5 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
```

AN 2002:51464 CAPLUS

DN 136:112673

TI Methods using a purine derivative, pyrimidine derivative, or tetrahydroindolone derivative for treatment of disease-induced peripheral neuropathy and related conditions

IN Diamond, Jack; Glasky, Alvin J.

PA Neotherapeutics, Inc., USA

SO PCT Int. Appl., 69 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

PATENT NO. KIND DATE APPLICATION NO. DATE **--**------------ΡI WO 2002004452 Α2 20020117 WO 2001-US21526 20010706 WO 2002004452 Α3 20030103 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,

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     389799-42-2
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     (Biological study); USES (Uses)
        (purine derivs., pyrimidine derivs., and tetrahydroindolone derivs. for
        treatment of disease-induced peripheral neuropathy and related
        conditions)
RN
     389799-42-2 CAPLUS
     Benzoic acid, 4-[[1-oxo-3-(4,5,6,7-tetrahydro-4-oxo-1H-indol-1-
CN
     yl)propyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)
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OEt
CH2-CH2
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A method of treating disease-induced peripheral neuropathy comprises AB administering to a patient with disease-induced peripheral neuropathy an effective quantity of a purine derivative or analog, a tetrahydroindolone derivative or analog, or a pyrimidine derivative or analog. If the compound is a

purine derivative, the purine moiety can be guanine or hypoxanthine. compound can induce peripheral nerve sprouting through the action of a neurotrophic factor such as nerve growth factor (NGF) without the occurrence of hyperalgesia. The peripheral nerve sprouting can be nociceptive nerve sprouting. The disease-induced peripheral neuropathy can be diabetic neuropathy or disease-induced peripheral neuropathy with another basis.

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ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
AN
     2002:51463 CAPLUS
DN
     136:112672
ΤI
    Methods using a purine derivative, pyrimidine derivative, or
     tetrahydroindolone derivative for stimulation of synthesis of
     synaptophysin in the central nervous system
```

IN Glasky, Michelle; Lahiri, Debomoy K.; Farlow, Martin R.

PΑ Neotherapeutics, Inc., USA

SO PCT Int. Appl., 59 pp.

CODEN: PIXXD2

DT Patent

LΑ English

FAN.CNT 1

L5

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OS MARPAT 136:112672

ΙT 389799-42-2

> RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(purine derivative, pyrimidine derivative, or tetrahydroindolone derivative

for

stimulation of synthesis of synaptophysin in CNS)

389799-42-2 CAPLUS RN

CN Benzoic acid, 4-[[1-oxo-3-(4,5,6,7-tetrahydro-4-oxo-1H-indol-1-yl)propyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

AB A method of increasing the synthesis and/or secretion of synaptphysin comprises administering to a patient with a neurol. disease or a patient at risk of developing a neurol. disease an effective quantity of a purine derivative of analog, a tetrahydroindolone derivative or analog, or a pyrimidine

derivative or analog. If the compound is a purine derivative, the purine moiety can

be guanine or hypoxanthine. The neurol. disease can be a neurodegenerative disease such as Alzheimer's disease or a neurodevelopmental disorder such as Down's syndrome. Typically, the compound can pass through the blood-brain barrier. A particularly preferred purine derivative is N-4-carboxyphenyl-3-(6-oxohydropurin-9-yl)propanamide.

- L5 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2002:51462 CAPLUS
- DN 136:112671
- TI Methods using a purine derivative, pyrimidine derivative, or tetrahydroindolone derivative for prevention of accumulation of amyloid  $\beta$  peptide in the central nervous system
- IN Glasky, Michelle; Lahiri, Debomoy K.; Farlow, Martin R.
- PA Neotherapeutics, Inc., USA
- SO PCT Int. Appl., 56 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN. CNT 1

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PATENT NO.
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- OS MARPAT 136:112671
- IT 389799-42-2

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(purine derivative, pyrimidine derivative, or tetrahydroindolone derivative

for

prevention of accumulation of amyloid  $\beta$  peptide in CNS)

RN 389799-42-2 CAPLUS

CN Benzoic acid, 4-[[1-oxo-3-(4,5,6,7-tetrahydro-4-oxo-1H-indol-1-yl)propyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

AB A method of either inhibiting the formation of Aβ or stimulating the formation of sAPP comprises administering to a patient with a neurol. disease or a patient at risk of developing a neurol. disease an effective quantity of a purine derivative or analog, a tetrahydroindolone derivative or analog, or a pyrimidine derivative or analog. If the compound is a purine derivative, the purine moiety can be guanine or hypoxanthine. The neurol. disease can be a neurodegenerative disease such as Alzheimer's disease or a neurodevelopmental disorder such as Down's syndrome. Typically, the compound can pass through the blood-brain barrier. A particularly preferred purine derivative is N-4- carboxyphenyl-3-(6-oxohydropurin-9-yl) propanamide.

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L5 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
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AN 2002:51461 CAPLUS

DN 136:112691

TI Methods using a purine derivative, a pyrimidine derivative or a tetrahydroindolone derivative for treatment of conditions affected by activity of multidrug transporters

IN Taylor, Eve M.

PA Neotherapeutics, Inc., USA

SO PCT Int. Appl., 70 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

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PATENT NO.
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OS MARPAT 136:112691

IT 389799-42-2

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(purine derivative, pyrimidine derivative or tetrahydroindolone derivative

for

treatment of conditions affected by activity of multidrug transporters)

389799-42-2 CAPLUS RN

Benzoic acid, 4-[[1-oxo-3-(4,5,6,7-tetrahydro-4-oxo-1H-indol-1-CN yl)propyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

AΒ One aspect of the invention is a method of treating a condition or disease associated with the activity of a multidrug transporter protein comprising administering to a mammal with a condition or disease associated with the activity of a multidrug transporter protein an effective quantity of a purine derivative or analog, a tetrahydroindolone derivative or analog, or a pyrimidine derivative or analog. If the compound is a purine derivative, the purine

moiety can be guanine or hypoxanthine. A particularly preferred bifunctional purine derivative is N-4-carboxyphenyl-3-(6-oxohydropurin-9yl)propanamide. The methods of the invention can be used to treat cancer, a microbial or parasitic infection, HIV, infection, or a condition associated with inflammation, e.g. asthma or rheumatic disease.

L5 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:51460 CAPLUS

DN 136:112670

TIMethods using purine derivatives, pyrimidine derivatives, and tetrahydroindolone derivatives for treatment of drug-induced peripheral neuropathy and related conditions

ΙN Diamond, Jack; Glasky, Alvin J.

PA Neotherapeutics, Inc., USA

SO PCT Int. Appl., 66 pp. CODEN: PIXXD2

DT Patent

LΑ English

FAN.CNT 2

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    MARPAT 136:112670
OS
IT
    389799-42-2
    RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
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        (purine derivs., pyrimidine derivs., and tetrahydroindolone derivs. for
        treatment of drug-induced peripheral neuropathy and related conditions)
RN
     389799-42-2 CAPLUS
CN
     Benzoic acid, 4-[[1-oxo-3-(4,5,6,7-tetrahydro-4-oxo-1H-indol-1-
    yl)propyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)
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AB A method of treating drug-induced peripheral neuropathy comprises

administering to a patient with drug-induced peripheral neuropathy an effective quantity of a purine derivative or analog, a tetrahydroindolone derivative or analog, or a pyrimidine derivative or analog. If the compound

is a

purine derivative, the purine moiety can be guanine or hypoxanthine. The compound can induce peripheral nerve sprouting through the action of a neurotrophic factor such as nerve growth factor (NGF) without the occurrence of hyperalgesia. The peripheral nerve sprouting can be nociceptive nerve sprouting. The drug-induced peripheral neuropathy can be drug-induced peripheral neuropathy associated with the administration of oncolytic drugs, such as a vinca alkaloid, cisplatin, paclitaxel, suramin, altretamine, carboplatin, chlorambucil, cytarabine, dacarbazine, docetaxel, etoposide, fludarabine, ifosfamide with mesna, tamoxifen, teniposide, or thioguanine. The methods of the invention are particularly useful in treating peripheral neuropathy associated with the administration of vincristine, paclitaxel, or cisplatin.

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L5 7 S L2

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L4 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:77551 CAPLUS

DN 138:131150

TI Methods for treating cognitive/attention deficit disorders using tetrahydroindolone analogues and derivatives

IN Glasky, Alvin J.; Fick, David B.; Helton, David

PA USA

SO U.S. Pat. Appl. Publ., 15 pp., Cont.-in-part of U.S. Ser. No. 839,289. CODEN: USXXCO

DT Patent

LA English

FAN.CNT 4

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FAN 2002:832760

PATENT NO. KIND DATE APPLICATION NO. DATE

WO 2002085856 A1 20021031 WO 2002-US11142 20020408

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FAN 2003:117681
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     WO 2003011396
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FAN 2003:473263
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OS
     MARPAT 138:131150
AΒ
     Methods for treating cognitive/attention deficit disorders in general
     using tetrahydroindolone derivs. and analogs, particularly
     tetrahydroindolone derivs. or analogs in which the tetrahydroindolone
     derivative or analog is covalently linked to another moiety to form a
     bifunctional conjugate are disclosed. More specifically, methods and
     compns. for treating attention deficit disorder and attention deficit
     hyperactivity disorders in adults and children as well as mild cognitive
     impairment and dementia are provided.
L4
     ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
AN
     2002:832760 CAPLUS
     137:337779
DN
TI
     Preparation of tetrahydroindolone analogs and derivatives as nootropic
     agents
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IN
    Fick, David B.; Foreman, Mark M.; Glasky, Alvin J.
PA
    Neotherapeutics, Inc., USA
SO
    PCT Int. Appl., 40 pp.
    CODEN: PIXXD2
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20021226

US 2002-365005PP 20020313 US 2002-371381PP 20020409 US 2001-839289 20010420

US 2002198218 **A1** OS MARPAT 137:337779

GI

$$\bigcap_{N} \bigcap_{N \to \infty} \bigcap_{N \to \infty$$

AB Tetrahydroindolone analogs and derivs. (e.g., I; wherein R = H, Et) were prepared Compound I (R = Et) was prepared in 56% yield by reacting acryloyl chloride with 4-aminobenzoic acid Et ester to give 76% 4-acryloylaminobenzoic acid Et ester, followed by reaction with 1,5,6,7-tetrahydro-4H-indol-4-one. Compound I (R=H) is then accessed through hydrolysis of the product. The prepared compds. showed good activity as nootropic agents. Thus, the minimal ED of I (R = Et) was 0.001 mg/kg in a passive avoidance test on mice.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:522636 CAPLUS

DN 137:73275

TΙ Use of 9-substituted purine analogues and other molecules to stimulate neurogenesis

Taylor, Eve M. ΙN

PA USA

U.S. Pat. Appl. Publ., 28 pp. SO CODEN: USXXCO

DTPatent

LΑ English

FAN.CNT 1

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                                           US 2000-254910PP 20001212
OS
     MARPAT 137:73275
     The invention provides a method of inducing neurogenesis by administering
AB
     to a mammal an effective quantity of a compound that induces neurogenesis,
     where neurogenesis includes proliferation of neural stem and progenitor
     cells, differentiation of these cells into neurons, and/or survival of
     these new neurons. In general, the compound comprises three moieties, A, L,
     and B, covalently linked. A can be a purine, tetrahydroindolone, or pyrimidine; L is a linker, while B is a moiety that promotes absorption of
     the compound A particularly preferred compound is N-4-[[3-(6-oxo-1,6-
     dihydropurin-9-yl)-1-oxopropyl]amino]benzoic acid (also known as AIT-082
     or leteprinim potassium). Another aspect of the invention is
     pharmaceutical compns. for inducing neurogenesis.
    ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
L4
AN
     2002:51464 CAPLUS
DN
     136:112673
ΤI
     Methods using a purine derivative, pyrimidine derivative, or
     tetrahydroindolone derivative for treatment of disease-induced peripheral
     neuropathy and related conditions
     Diamond, Jack; Glasky, Alvin J.
ΙN
PA
     Neotherapeutics, Inc., USA
SO
     PCT Int. Appl., 69 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
    English
FAN.CNT 2
     PATENT NO.
                      KIND DATE
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    WO 2002004452 A2
WO 2002004452 A3
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    US 6630490
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                            20031007
                                           US 2000-216844PP 20000707
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    US 6630478
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PATENT FAMILY INFORMATION:

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                                                     WO 2001-US21373W 20010706
OS
     MARPAT 136:112673
     A method of treating disease-induced peripheral neuropathy comprises
is a
     purine derivative, the purine moiety can be guanine or hypoxanthine.
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AΒ administering to a patient with disease-induced peripheral neuropathy an effective quantity of a purine derivative or analog, a tetrahydroindolone derivative or analog, or a pyrimidine derivative or analog. If the compound

compound can induce peripheral nerve sprouting through the action of a neurotrophic factor such as nerve growth factor (NGF) without the occurrence of hyperalgesia. The peripheral nerve sprouting can be nociceptive nerve sprouting. The disease-induced peripheral neuropathy can be diabetic neuropathy or disease-induced peripheral neuropathy with another basis.

- ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN L4
- AN2002:51463 CAPLUS
- DN136:112672
- ΤI Methods using a purine derivative, pyrimidine derivative, or tetrahydroindolone derivative for stimulation of synthesis of synaptophysin in the central nervous system
- IN Glasky, Michelle; Lahiri, Debomoy K.; Farlow, Martin R.
- PA Neotherapeutics, Inc., USA
- PCT Int. Appl., 59 pp. SO

CODEN: PIXXD2

- DT Patent
- LA English

FAN.CNT 1

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Patel

CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,

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09839289.1
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Page 21

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     US 2002040032
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                            20020404
                                           US 2001-899478
                                           US 2000-216808PP 20000707
OS
     MARPAT 136:112672
     A method of increasing the synthesis and/or secretion of synaptphysin
AΒ
     comprises administering to a patient with a neurol. disease or a patient
     at risk of developing a neurol. disease an effective quantity of a purine
     derivative of analog, a tetrahydroindolone derivative or analog, or a
pyrimidine
     derivative or analog. If the compound is a purine derivative, the purine
moiety can
     be quanine or hypoxanthine. The neurol. disease can be a
     neurodegenerative disease such as Alzheimer's disease or a
     neurodevelopmental disorder such as Down's syndrome. Typically, the
     compound can pass through the blood-brain barrier. A particularly preferred
     purine derivative is N-4-carboxyphenyl-3-(6-oxohydropurin-9-yl)propanamide.
L4
    ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
     2002:51462 CAPLUS
AN
DN
     136:112671
ΤI
     Methods using a purine derivative, pyrimidine derivative, or
     tetrahydroindolone derivative for prevention of accumulation of amyloid
     \beta peptide in the central nervous system
IN
     Glasky, Michelle; Lahiri, Debomoy K.; Farlow, Martin R.
PA
     Neotherapeutics, Inc., USA
SO
     PCT Int. Appl., 56 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     English
FAN.CNT 1
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    WO 2002004450 A2
PΙ
                            20020117
                                           WO 2001-US21384 20010706
     WO 2002004450
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                            20020404
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                                           US 2000-216845PP 20000707
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OS MARPAT 136:112671

> A method of either inhibiting the formation of  $A\beta$  or stimulating the formation of sAPP comprises administering to a patient with a neurol. disease or a patient at risk of developing a neurol. disease an effective quantity of a purine derivative or analog, a tetrahydroindolone derivative or

AB

analog, or a pyrimidine derivative or analog. If the compound is a purine derivative, the purine moiety can be guanine or hypoxanthine. The neurol. disease can be a neurodegenerative disease such as Alzheimer's disease or a neurodevelopmental disorder such as Down's syndrome. Typically, the compound can pass through the blood-brain barrier. A particularly preferred purine derivative is N-4- carboxyphenyl-3-(6-oxohydropurin-9-yl)propanamide.

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L4
      ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
      2002:51461 CAPLUS
AN
DN
      136:112691
ΤI
      Methods using a purine derivative, a pyrimidine derivative or a
      tetrahydroindolone derivative for treatment of conditions affected by
      activity of multidrug transporters
ΙN
      Taylor, Eve M.
PA
      Neotherapeutics, Inc., USA
SO
      PCT Int. Appl., 70 pp.
      CODEN: PIXXD2
DT
      Patent
LΑ
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FAN.CNT 1
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PΙ
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OS MARPAT 136:112691

AB One aspect of the invention is a method of treating a condition or disease associated with the activity of a multidrug transporter protein comprising administering to a mammal with a condition or disease associated with the activity of a multidrug transporter protein an effective quantity of a purine derivative or analog, a tetrahydroindolone derivative or analog, or a pyrimidine derivative or analog. If the compound is a purine derivative, the purine

moiety can be guanine or hypoxanthine. A particularly preferred bifunctional purine derivative is N-4-carboxyphenyl-3-(6-oxohydropurin-9-yl)propanamide. The methods of the invention can be used to treat cancer, a microbial or parasitic infection, HIV, infection, or a condition associated with inflammation, e.g. asthma or rheumatic disease.

- L4 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2002:51460 CAPLUS
- DN 136:112670
- TI Methods using purine derivatives, pyrimidine derivatives, and tetrahydroindolone derivatives for treatment of drug-induced peripheral neuropathy and related conditions
- IN Diamond, Jack; Glasky, Alvin J.
- PA Neotherapeutics, Inc., USA

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SO
     PCT Int. Appl., 66 pp.
     CODEN: PIXXD2
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LA
FAN.CNT 2
     PATENT NO.
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A3
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                                           US 2000-216844PP 20000707
                                           WO 2001-US21526W 20010706
OS
    MARPAT 136:112670
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AB A method of treating drug-induced peripheral neuropathy comprises administering to a patient with drug-induced peripheral neuropathy an effective quantity of a purine derivative or analog, a tetrahydroindolone derivative or analog, or a pyrimidine derivative or analog. If the compound is a

purine derivative, the purine moiety can be guanine or hypoxanthine. The compound can induce peripheral nerve sprouting through the action of a neurotrophic factor such as nerve growth factor (NGF) without the occurrence of hyperalgesia. The peripheral nerve sprouting can be nociceptive nerve sprouting. The drug-induced peripheral neuropathy can be drug-induced peripheral neuropathy associated with the administration of oncolytic drugs, such as a vinca alkaloid, cisplatin, paclitaxel, suramin, altretamine, carboplatin, chlorambucil, cytarabine, dacarbazine, docetaxel, etoposide, fludarabine, ifosfamide with mesna, tamoxifen, teniposide, or thioguanine. The methods of the invention are particularly useful in treating peripheral neuropathy associated with the administration of vincristine, paclitaxel, or cisplatin.

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L3

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L1 STRUCTURE UPLOADED

L2 1 S L1 SSS FULL

FILE 'MARPAT' ENTERED AT 13:27:28 ON 12 FEB 2004 8 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 13:27:51 ON 12 FEB 2004

L4 8 S L3

L5 7 S L2

=> s 14 and 15

6 7 L4 AND L5

=> s neurogenesis and 16

17 0 NEUROGENESIS AND L6

=> s neurogenesis and indole

L8 0 NEUROGENESIS AND INDOLE

=> s neurogenesis and indolone

L9 0 NEUROGENESIS AND INDOLONE

=> s neurogenesis and tetrahydroindolon

L10 0 NEUROGENESIS AND TETRAHYDROINDOLON

=> s neurogenesis and aminobenzoic acid and ester

1 NEUROGENESIS AND AMINOBENZOIC ACID AND ESTER

=> d l11 fbib hitstr abs total

L11 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:814890 CAPLUS

DN 137:310756

TI Synthesis of purine analogues and derivatives as nootropic agents

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IN Fick, David B.; Foreman, Mark M.; Glasky, Alvin J.
PA USA
SO U.S. Pat. Appl. Publ., 23 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO.
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\_ \_ \_ \_ PΙ US 2002156277 Α1 20021024 US 2001-839290 20010420 WO 2002085904 A1 20021031 WO 2002-US11151 20020408 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG US 2001-839290 A 20010420

OS MARPAT 137:310756 GI

AB A purine derivative or analog comprising a 9-atom bicyclic moiety, moiety A, linked through a linker L to a moiety B, where B is a carboxylic acid, a carboxylic acid ester, or a moiety of the structure N(Y1)-D, where Y1 can be one of a variety of substituents, including hydrogen or alkyl, and D is a moiety that enhances the pharmacol. effects, promotes absorption or blood-brain barrier penetration of the derivative or analog, e.g. of formula I [R1 = H, alkyl, aralkyl, cycloalkyl, heteroalkyl; R2 = H, alkyl, cycloalkyl, halo, amino, etc.; L = hydrocarbyl, etc.; B = (substituted) OH, etc.] are prepared as nootropic agents. Thus, II was prepared from 4-[3-(6-oxo-1,6-dihydropurin-9-yl)propionylamino]benzoic acid Et ester and benzyl bromide in 82% yield. The minimal ED of II was 0.0003 mg/kg in a passive avoidance test on mice.

=> log y
COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST
130.05 395.10

09839289.1 Page 26

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
ENTRY
SESSION
CA SUBSCRIBER PRICE

TOTAL

-11.09

STN INTERNATIONAL LOGOFF AT 13:32:22 ON 12 FEB 2004